Model 6809 Data Streamer

Model 6809 Data Streamer™ Tape Transport

The Kennedy Data Streamer was specifically designed for use with a Winchester disk drive backup where fast starting and stopping is not required. By limiting this start/stop capability, complexity and cost have been reduced to a minimum.

Model 6809 Data Streamer is designed to emulate the performance of the IBM 8809.

Features include:

- **Tape drive includes built-in formatter—it's a compact package.**

- **Contains only four moving parts—hence a much higher MTBF than normal tape drives.**

- **Streams (read/writes) at 100 ips or, in start/stop mode, 12.5 ips.**

- **Uses an extremely accurate, low inertia tachometer and microprocessor controlled speed control, thus eliminating expensive, conventional capstan motor and expensive tape tension buffering.**

- **Utilizes infrared EOT/BOT sensors which are impervious to ambient light.**

- **Up to eight drives may be daisy chained.**

- **Industry compatible formatter interface.**

- **Automatic Tape Size Sensor—Can use any of the three conventional sizes of reels, 7", 8.5" or 10.5."**

- **Can be mounted in three ways—vertically in rack, horizontally in drawer or horizontally in a low boy console.**

- **Microprocessor-controlled self test routines and diagnostics aid in troubleshooting. Insures that you have a working unit and cuts down MTTR.**

- **All solid state electronics and control.**

- **Soft load and unload. Tape is loaded and unloaded very gently, no damage to tape.**

- **Finally, the Model 6809 is much less expensive than traditional tape transport/formatter combinations. It is ideal for large capacity disk drive backup.**

The 6809 has four moving parts; the two reel motors, a dynamic tension sensor and a low inertia tachometer. The tape coming off the supply reel travels around an idler roller with its associated dynamic tension sensor. The tape then travels through the head area which contains an infrared EOT/BOT broken tape sensor, tape cleaner and a hard head. The tape then runs across another idler roller which is attached to the tachometer, then onto the take-up reel. Feedback, from the tachometer, controls tape speed and tension, by determining the amount of tape on each reel; then dynamically changing the amount of power supplied to each reel, as required.

There are a total of three main PC boards in the Model 6809: the write and control, the read, and the power servo. The formatter logic for data encoding, data decoding and controlling the tape drive is contained on these modules. Up to 8 drives can be daisychained on the input side of the formatter.

The interface to the drive is the "industry standard" formatter interface with slight modifications to accommodate the added functions within the Model 6809.

The straight loading path and automatic reel size sensor allow for ease of loading and removing tape. With the aid of the formatter's microprocessor, the tape will be advanced to load point and have proper tension applied across the tape path for correct operation once the user depresses the "load" switch.
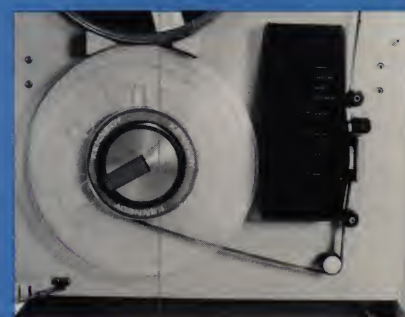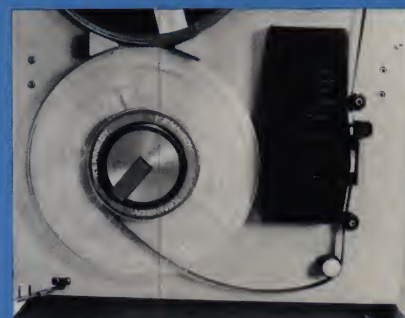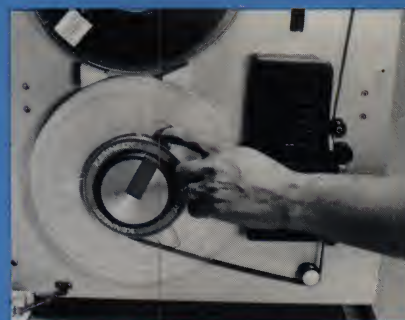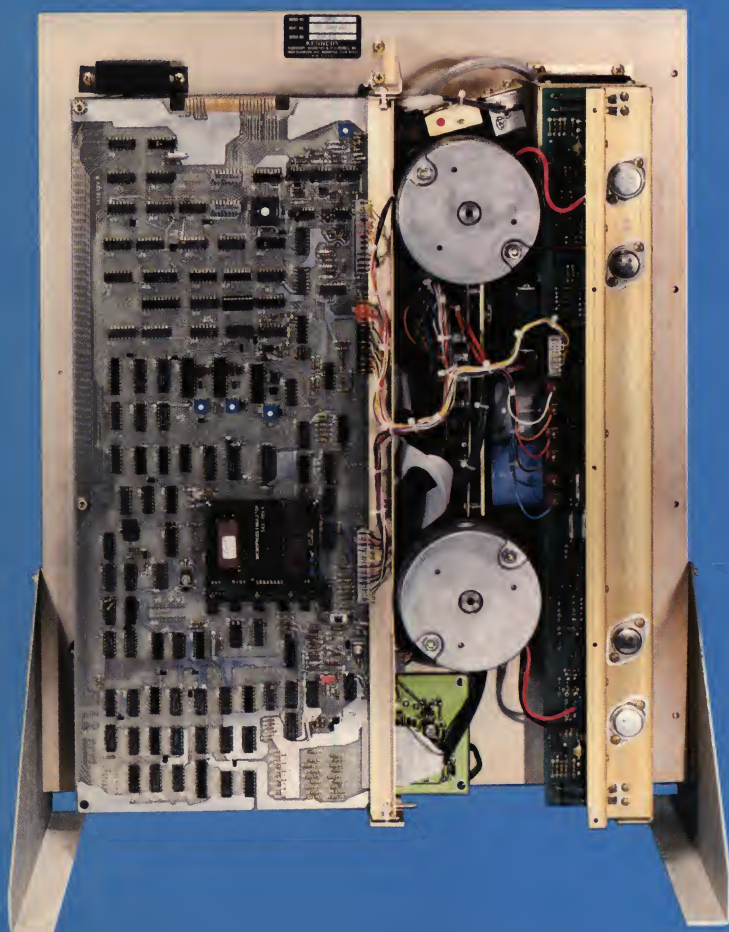
The microprocessor also is used for controlling many self tests and will run diagnostics should repair be necessary.

Reliable—
Economical—
Versatile—

The compact Model 6809
provides easy access to all
major components, in any of
it's mounting configurations.

Model 6809 incorporates a
soft-load feature, which
prevents loading when there is
slack in the tape. This is
accomplished by moving tape
in small increments, until tape
motion is detected at the
tachometer. The tape then
loads up, and searches for the
load point at slow speed.

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Data Density	1600 cpi	
Number of tracks	9 track read-after-write	
Format	Phase encoded ANSI & IBM compatible	
Tape Speed	100 ips streaming, 12.5 start/stop	
Speed Variation	±5%	
Access Time	Start/Stop	Streaming
Read	40 ms	295 ms
Write	40 ms	295 ms
Command Reissue Time (Streaming Mode)	IRG Size	Time
Between write block	0.6 in.	4.5 ms
write tape mark, or		
Space block commands	1.2 in.	10.5 ms
Between read block	0.6 in.	6.0 ms
	1.2 in.	10.5 ms
Repositioning time (Streaming Mode)		
Stopped condition		880 ms nominal
Gaps (Externally selected)	0.6 in. or 1.2 in.	
Parity	Internal or external	
Tape Tension	8.0 oz.	
Reel Size	7," 8.5," or 10.5"	
Rewind Speed	200 ips nominal	
Data Streamer Interface	Industry compatible formatter	
Physical Dimensions	8.75" x 17" x 22.75" and 8.75" x 19" x 22.75"	
Mounting	Horizontal, Drawer, Vertical	
Weight	50 lbs.	
Power	100, 115, 220, 240, VAC 50/60 Hz	
	250 watts max.	
MTBF Design Goal	> 5,000 hrs.	
Operating Temperature	+2C to 50C	
Humidity	15 to 95% non-condensing	
Options Available	Special Paint	
	Bus Interface	
	Drawer Mount	

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